

Name: \_\_\_\_\_

### pa1030: Box multiplication of linear binomials (v1)

#### Example

Use the box method to multiply  $(6x + 3)$  and  $(2x + 4)$ .

|    |         |    |                           |
|----|---------|----|---------------------------|
| *  | 6x      | 3  |                           |
| 2x | $12x^2$ | 6x | $12x^2 + 6x + 24x + 12$   |
| 4  | 24x     | 12 | Combine<br>like<br>terms. |
|    |         |    | $12x^2 + 30x + 12$        |

ANSWER:  $12x^2 + 30x + 12$

#### Question 1

Use the box method to multiply  $(2x + 5)$  and  $(9x + 3)$ .

|    |         |     |  |
|----|---------|-----|--|
| *  | 2x      | 5   |  |
| 9x | $18x^2$ | 45x |  |
| 3  | 6x      | 15  |  |

ANSWER:  $18x^2 + 51x + 15$

### Question 2

Use the box method to multiply  $(-6x + 2)$  and  $(8x + 9)$ .

|    |          |     |
|----|----------|-----|
| *  | $-6x$    | 2   |
| 8x | $-48x^2$ | 16x |
| 9  | $-54x$   | 18  |

ANSWER:  $-48x^2 - 38x + 18$

### Question 3

Use the box method to multiply  $(-2x + 5)$  and  $(9x + 8)$ .

|    |          |     |
|----|----------|-----|
| *  | $-2x$    | 5   |
| 9x | $-18x^2$ | 45x |
| 8  | $-16x$   | 40  |

ANSWER:  $-18x^2 + 29x + 40$